

## WHAT IS CLAIMED IS:

1. A method for correlating descriptive attributes of a portfolio of assets, said method comprising the steps of:

identifying descriptive attribute variables in the portfolio;

5 calculating a value of a response variable or frequency of occurrence for levels or bins of individual attribute variables and pairs of attribute variables;

grouping the assets according to the value of a response variable or frequency of occurrence of the individual attribute variables; and

displaying the groupings.

10 2. A method according to Claim 1 wherein said step of identifying descriptive attribute variables further comprises the step of determining if the variable type is continuous or categorical.

3. A method according to Claim 2 wherein said step of calculating an average value of a response variable further comprises the steps of:

computing an average response value for categorical variables;

15 computing bins for continuous variables; and

computing an average bin response.

4. A method according to Claim 1 wherein said step of calculating an average value of a response variable further comprises the steps of calculating average value according to

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$$Y_{r\text{ Average}} = \text{sum}(Y(x1 = a \text{ and } x2 = b)) / \text{count}(x1 = a \text{ and } x2 = b)$$

where x1 are categorical variables and x2 are continuous variables.

5. A method according to Claim 1 wherein said step of grouping the assets further comprises the step of computing an average for a response variable for all combinations of pairs of attribute variables, and the levels of the attribute variables.

5 6. A method according to Claim 5 further comprising the step of computing an expected value of the response variable from a weighted value of occurrence for the separate attribute variables.

7. A method according to Claim 6 wherein said step of computing an expected value of the response variable further comprising the step of computing expected value according to

$$Y_{r \text{ Expected}} = [\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)] / [\text{count}(x1=a) * \text{count}(x2=b)]$$

where x1 are categorical variables and x2 are continuous variables.

8. A method according to Claim 6 further comprising the step of computing a deviation of the response variable from the expected value of the response variable, where the deviation is the average value of the response variable minus the expected value.

9. A method according to Claim 8 wherein said step of displaying the groupings further comprises the step of displaying a graphical embodiment of the response variables and expected values of the response variables.

10. A method according to Claim 9 wherein said step of displaying a graphical embodiment further comprises the step of displaying a three dimensional visualization of the response variables and expected values of the response variables.

11. A system for correlating descriptive attributes of an asset portfolio, said system comprising:

a computer configured as a server and further configured with a database of asset portfolios and to enable valuation process analytics;

at least one client system connected to said server through a network, said server configured to:

5 identify descriptive attribute variables in the portfolio;

calculate a value of a response variable or frequency of occurrence for levels or bins of individual attribute variables and pairs of attribute variables;

group the assets according to the value of a response variable or frequency of occurrence of the individual attribute variables; and

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display the groupings.

12. A system according to Claim 11 wherein said server configured to determine if the variable type is continuous or categorical.

13. A system according to Claim 12 wherein said server configured to:

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compute an average response value for categorical variables;

compute bins for continuous variables; and

compute an average bin response.

14. A system according to Claim 11 wherein said server configured to calculate an average value of a response variable according to

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$$Y_{\text{Average}} = \text{sum}(Y(x1 = a \text{ and } x2 = b)) / \text{count}(x1 = a \text{ and } x2 = b)$$

where x1 are categorical variables and x2 are continuous variables.

15. A system according to Claim 11 wherein said server configured to:

compute an average for a response variable for all combinations of pairs of attribute variables; and

store values of the attribute variables.

16. A system according to Claim 15 wherein said server configured to compute an expected value of the response variable from a weighted value of occurrence for the separate attribute variables.

17. A system according to Claim 15 wherein said server configured to compute an expected value of the response variable according to

$$Y_{r \text{ Expected}} = [\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)] / [\text{count}(x1=a) * \text{count}(x2=b)]$$

where x1 are categorical variables and x2 are continuous variables.

18. A system according to Claim 16 wherein said server configured to compute a deviation of the response variable from the expected value of the response variable, where the deviation is the average value of the response variable minus the expected value.

19. A system according to Claim 18 wherein said server configured to display a graphical embodiment of the response variables and expected values of the response variables.

20. A system according to Claim 19 wherein said server configured to display a three dimensional visualization of the response variables and expected values of the response variables.

21. A computer for correlating descriptive attributes of an asset portfolio, said computer including a database of asset portfolios, said computer programmed to:

identify descriptive attribute variables in the portfolio;

calculate a value of a response variable or frequency of occurrence for levels or bins of individual attribute variables and pairs of attribute variables;

group the assets according to the value of a response variable or frequency of occurrence of the individual attribute variables; and

5 display the groupings.

22. A computer according to Claim 21 programmed to determine if the variable type is continuous or categorical.

23. A computer according to Claim 22 programmed to:

compute an average response value for categorical variables;

compute bins for continuous variables; and

compute an average bin response.

24. A computer according to Claim 21 programmed to calculate an average value of a response variable according to

$$Y_{r \text{ Average}} = \text{sum}(Y(x1 = a \text{ and } x2 = b)) / \text{count}(x1 = a \text{ and } x2 = b)$$

where x1 are categorical variables and x2 are continuous variables.

25. A computer according to Claim 21 programmed to:

compute an average for a response variable for all combinations of pairs of attribute variables; and

store values of the attribute variables.

26. A computer according to Claim 25 programmed to compute an expected value of the response variable from a weighted value of occurrence for the separate attribute variables.

27. A computer according to Claim 25 programmed to compute an expected value of the response variable according to

$$Y_{r \text{ Expected}} = [\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)] / [\text{count}(x1=a) * \text{count}(x2=b)]$$

5 where x1 are categorical variables and x2 are continuous variables.

28. A computer according to Claim 26 programmed to compute a deviation of the response variable from the expected value of the response variable, where the deviation is the average value of the response variable minus the expected value.

10 29. A computer according to Claim 28 programmed to display a graphical embodiment of the response variables and expected values of the response variables.

15 30. A computer according to Claim 29 programmed to display a three dimensional visualization of the response variables and expected values of the response variables.